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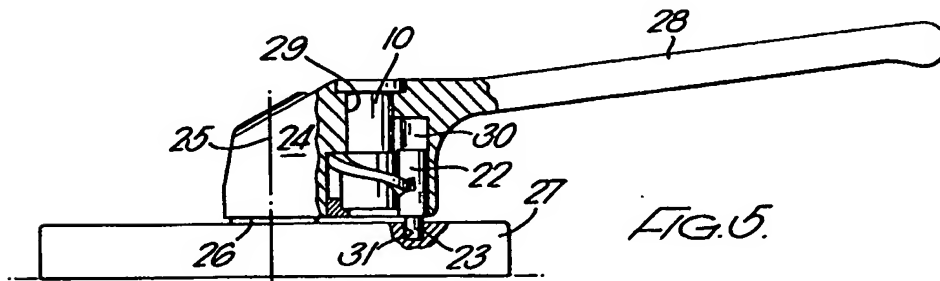
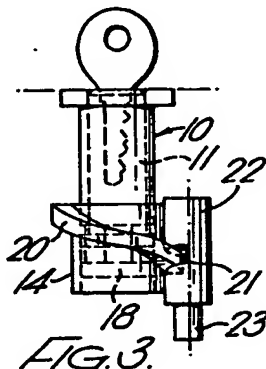
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GB A 2147048 GB 0831723

(58) Field of search
E2A
Selected US specifications from IPC sub-class E05B

(54) Locking device

(57) A barrel lock 10 is attached to a sleeve by a bayonet joint held in position by a locking tab 18. Externally the sleeve has a spiral rib engaged in a groove in a plunger 22. As the barrel lock 10 is rotated by a key the plunger is moved downwardly so that a locking extension 23 of the plunger engages in a bore 31 in the base 27. The device can be used for example to lock a window handle 28.

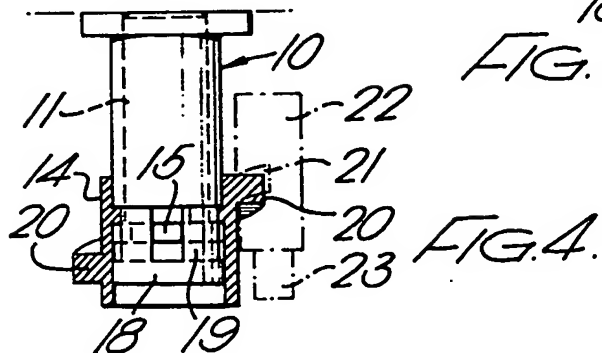
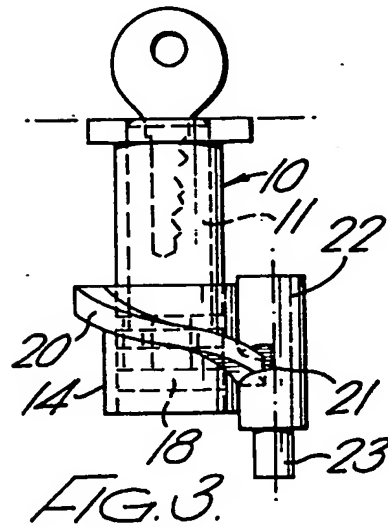
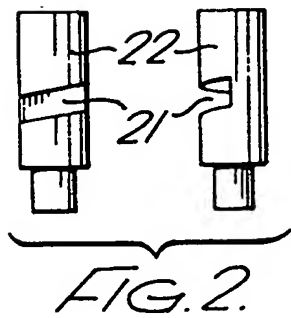
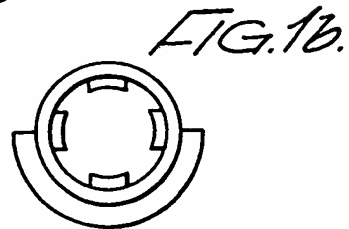
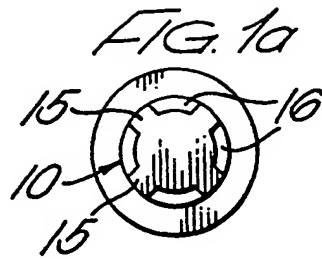
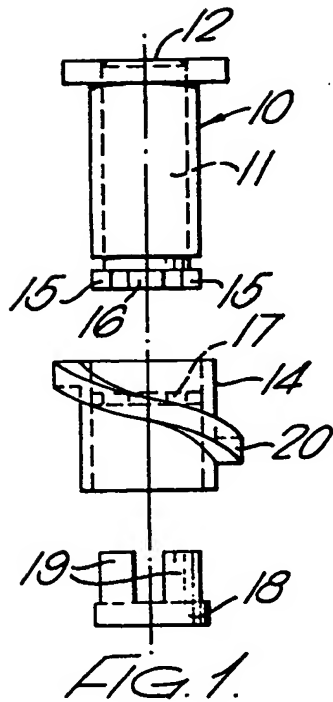


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The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1982.

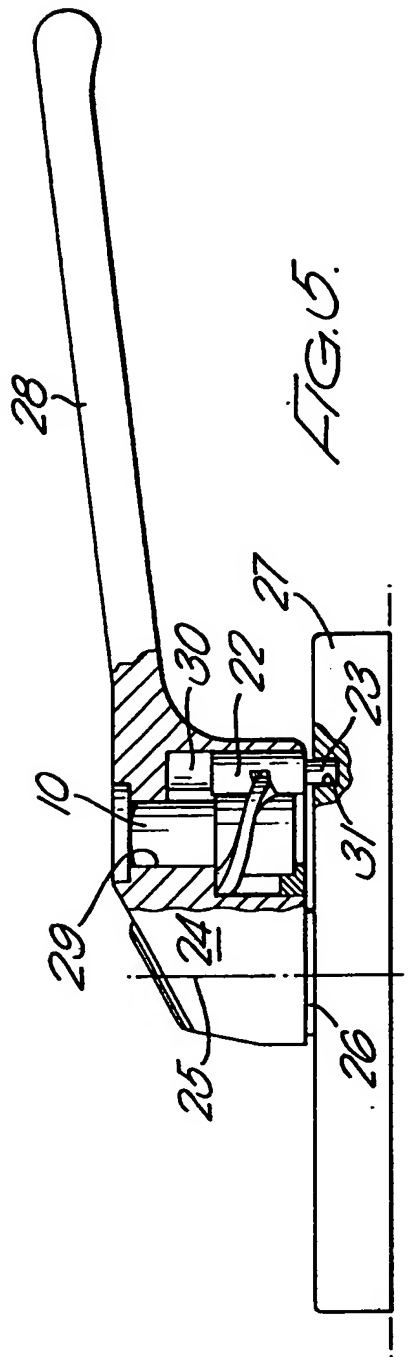
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SPECIFICATION

Locking device

5 This invention relates to a locking device and is particularly concerned with the adaptation of a barrel lock to enable it to be used to move a plunger axially so as to act as a locking plunger.

10 A particular application of such a device is to a window or door fastening handle where the handle is pivoted on a post and it is desirable to lock the handle in its closed position by means of a plunger which extends from the handle into a base or into fixed structure.

15 In accordance with the invention a locking device comprises a barrel lock having a rotatable member, means attached to the rotatable member carrying an external helical cam or rib engageable in a slot or groove in a plunger, or means attached to the rotatable member having a helical slot or groove into which extends a projection on the plunger, whereby when the barrel lock is rotated the plunger is moved axially.

25 Preferably the means attached to the rotatable member comprises a sleeve and a bayonet attachment by which the sleeve is attached to the rotatable member of the barrel lock. The bayonet attachment may for instance comprise internal projections within the sleeve which may be entered into the hollow end of the rotatable member of the barrel lock, the projections passing through slots between internal ribs in the barrel lock and then being rotated so as to engage in bayonet fashion.

30 Preferably a locking tab is provided which has projecting portions which enter the spaces between the ribs inside the rotatable member so as to prevent removal of the sleeve from the rotatable member.

40 The locking device may be for instance applied to a handle such as may be used on a window, the handle being pivoted on a post and the barrel lock being contained in a bore extending through the handle, the plunger being contained in a parallel bore and being movable axially so that one end of the plunger may engage the handle base or a fixed portion so as to lock the handle in position. The locking device may for instance be applied to a handle of the kind shown in our patent application 8426836 or application 8322957.

In the accompanying drawings:

55 *Figure 1* is an exploded elevation of a barrel lock together with the sleeve and locking tab;

Figure 1a is an under plan of the barrel lock of *Fig. 1*;

Figure 1b is a plan of the sleeve of *Fig. 1*;

60 *Figure 1c* is a plan of the locking tab of *Fig. 1*;

Figure 2 shows front and side elevations of a locking plunger;

65 *Figure 3* is a composite elevation of the part shown in *Figs. 1* and *2* illustrating how the

barrel lock and plunger are assembled;

70 *Figure 4* is an elevation partly in section similar to *Fig. 3* but with the plunger in its unlocked position in *Fig. 4* whereas in *Fig. 3* it is in the locked position;

Figure 5 is an elevation, partly in section, of a portion of a window handle embodying the invention.

75 In *Fig. 1* is shown a barrel lock 10 which has a rotatable member 11 which may be rotated by inserting a key conventional fashion so that the barrel lock and rotatable member rotate together.

80 The rotatable member 11 has at one end part of a bayonet fixing comprising radially extending projections 15 between which are arcuate spaces 16.

85 A sleeve 14 has internally projecting ribs 17 and the sleeve 14 may be engaged over the end of the rotatable member 11 so that the ribs 17 pass through the arcuate spaces or slots 16 and then the sleeve may be turned one eighth of a turn so as to effect bayonet engagement of the sleeve with the rotatable member 11. The sleeve may then be locked in position by means of locking tab 18 which has projections 19 engageable in the arcuate slots 16. When the tab is pushed in place the sleeve 14 cannot be removed from the barrel lock.

95 Externally the sleeve 14 carries a helical rib 20 which is designed to engage in a slot 21 in a plunger 22 (*Fig. 2*). As seen in *Fig. 3* the plunger 22 is in the locked position in which a locking projection 23 on the end of the plunger 22 will engage in an aperture in fixed structure (not shown) whereas in *Fig. 4* the barrel lock has been turned so that the sleeve 14 has been rotated to withdraw the plunger 22 in an upward axial direction to its unlocked position.

100 The application of this locking device to a window catch is shown in *Fig. 5*. The catch comprises a body 24 pivoted about an axis 25 on a post 26 to a base member 27. The catch has a handle 28 returning it in conventional manner and the locking device of this invention is incorporated into a portion of the handle. The barrel lock 10 is located in a bore 29 and the plunger 22 is located in a parallel overlapping bore 30. As can be seen the locking extension 23 of the plunger engages in a prepared bore 31 in the fixed base 27. Thus the handle 28 may be locked in the position shown in *Fig. 5* so as to prevent the handle being turned to open a window or a door or any other device with which such a handle might be employed.

105 The barrel locking device of this invention may be applied to other situations. It may for instance be used for locking patio doors or other sliding doors by incorporating the barrel lock and plunger in a block attached to the door so that the plunger extension 23 will enter a bore in a fixed portion of the frame of

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the patio door.

CLAIMS

1. A locking device comprising a barrel
5 lock having a rotatable member, means attached to the rotatable member carrying an external helical cam or rib engageable in a slot or groove in a plunger, or means attached to the rotatable member having a helical slot or
10 groove into which extends a projection on the plunger, whereby when the barrel lock is rotated the plunger is moved axially.
2. A locking device according to claim 1 and in which the means attached to the rotatable member comprises a sleeve and a bayonet attachment by which the sleeve is attached to the rotatable member of the barrel lock.
3. A locking device according to claim 2
20 and in which the bayonet attachment comprises internal projections within the sleeve which are adapted to be entered into the hollow end of the rotatable member of the barrel lock, the projections passing through slots between internal ribs in the barrel lock and then
25 being rotated so as to engage in bayonet fashion.
4. A locking device according to claim 3 and including a locking tab which has projecting portions which enter the spaces between the ribs inside the rotatable member so as to prevent removal of the sleeve from the rotatable member.
5. A locking device according to any preceding claim applied to a handle the handle
35 being pivoted on a post and the barrel lock being contained in a bore extending through the handle, the plunger being contained in a parallel bore and being movable axially so that
40 one end of the plunger may engage a handle base or a fixed portion so as to lock the handle in position.
6. A locking device substantially as hereinbefore particularly described and as illustrated
45 in the accompanying drawings.